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Mr. Lea made some remarks on the subject of the periodicity of the Family *Unionidæ*. He mentioned that some of the species matured and ejected from their oviducts the perfect shell in the autumn, others in the spring, and some apparently in the winter. He mentioned that few observations had yet been made on this interesting branch of animal economy. He had himself made some observations many years since on the *Uniones* and *Anodontæ* of our vicinity; and his brother, T. G. Lea, had, at his request, made some interesting observations of those in the vicinity of Cincinnati, part of which had been noted in the Transactions of the American Philosophical Society. He then read part of a letter from Mr. Joseph Clark of Cincinnati, in which he mentions having observed the periodicity of several species within the last six months. The *Anodonta edentula*, Say, was found with oviducts fully charged in September, as were also *Unio ellipsis*, Lea, *U. irroratus*, Lea, *U. securis*, Lea, *U. foliatus*, Hild. and *U. orbiculatus*, Hild. In October he found the ova of the *Unio multiplicatus*, Lea, more than half developed, and thinks they would have been matured in the spring. In the *Unio anodontoides*, Lea, they were beautifully developed, and would probably have been matured and voided in the winter. The oviducts of the last species are bordered with a beautiful blue color.

Thus Mr. Clark's conclusions were the same as to the different periods of various species as Mr. Lea's, and there cannot be a doubt but that the terms of the species differ according to their own law.

March 30th.

Vice President BRIDGES in the Chair.

The Committee on Mr. Lea's description of a new *Unio*, reported in favor of publication in the Proceedings.

Description of a new species of Symphynote Unio.

BY ISAAC LEA.

UNIO CUMINGII. Testa alata, plicata, triangulari, valde compressa, posticè angulata, valde inæquilaterali; alâ elevatâ, acuminatâ, margine crenulatâ; valvulis subtenuibus, antè et post nates connatis; natibus, et alæ posterioris basi apiceque undulatis; natibus compressis, ad apicem undulatis, haud prominentibus; epidermide nitidâ, tenebroso viridi, perradiatâ; dentibus cardinalibus lamellatis, lateralibus longissimis, lamellatis subcurvisque; ligamento celato; margaritâ albâ et iridescente.

Shell alate, plicate, triangular, very much compressed, angular behind, very inequilateral; wing high, acuminate, crenulate on the margin; valves rather thin, connate before and behind the beak; beaks, and the base and summit of the posterior wing undulated; beaks compressed, undulated at the tip, not prominent; epidermis shining, dark green, radiated all over; cardinal teeth lamellar; lateral teeth very long, lamellar and somewhat curved; ligament concealed; nacre white and iridescent.

Habitat northern part of China. H. Cuming, Esq.

Diam. .7, length 2.6, breadth 3.1 inches.

This very beautiful and rare *Unio* is, in form and general outline, very much like the *Dipsas plicatus*, Leach, but they cannot be confounded with each other, as they belong to very distinct genera, the *Dipsas* having but one linear tooth in each valve, while the above described shell has perfectly well defined lamellar cardinal teeth, double in the right and single in the left valve. It also has long, lamellar, lateral teeth, double in the left and single in the right valve. It differs also in the folds, having them extending over the flattened side from the beaks, in this specimen, which is not half grown, to half the length of the shell. The folds

on the wing also differ, the *Cumingii* having the row from the beak to the posterior margin much nearer to the umbonial slope. The folds in the superior part of the wing are smaller. This shell is very much compressed at the beaks and reminds one of the *Margaritana complanata* (nobis.)

Mr. Cuming informs me that he has received several specimens from the northern part of China, and that the full grown ones are $5\frac{1}{2}$ inches by $6\frac{1}{2}$ inches. I dedicate the specimen to my friend, Mr. Cuming, to whose kindness I owe the possession of my specimen.

The Committee on the following paper of Dr. C. M. Wetherill, reported in favor of publication in the Proceedings :

Examination of Molybdate of Lead, from Wheatley's Mine near Phoenixville, Chester County, Pennsylvania.

BY CHARLES M. WETHERILL, Ph. D.

The mineral was given to me by Mr. W. S. Vaux, who received it from Mr. Wheatley. It was found at his mine near Phoenixville, Chester County, Pa. The Molybdate occurs with Phosphate of Lead. The crystals (square tables modified,) are of *light red* color. Lustre adamantine, translucent, streak white. Before the blow-pipe on charcoal decrepitates, and fuses with reduction of lead. On platinum wire with borax in the outer flame is dissolved to a transparent glass, yellow while hot, colorless on cooling; in the inner flame, the bead becomes deep brown when cool. In salt of phosphorus in the outer flame, the same reaction occurs as with borax; in the inner flame the green color characteristic of Molybdena appears. It dissolves almost completely in nitric acid, and in hydrochloric with a residue of chloride of lead; these solutions are yellow. Hardness between selenite and calc spar, or between two and three of Mohs' scale. Density ascertained with one gramme of the crystals 5.6.

A portion of the crystals was analyzed in the moist way by dissolving in boiling dilute hydrochloric acid, and separating the crystals of chloride of lead, which form on cooling. These crystals were not completely soluble in boiling water, but left a residue in small quantity, apparently silica. The solution filtered from the chloride of lead, treated with sulphuretted hydrogen, gave a dark brown precipitate, composed of the sulphurets of lead and molybdenum, the latter was dissolved from the lead by hydrosulphuret of ammonia. The filtrate from the sulph. hydrogen precipitate contained a trace of iron.

I was not able to detect chromium either by the moist way or before the blow-pipe. The earths and alkaline earths were also absent.

I am not aware that a red molybdate of lead of American locality has been described.

The following resolution was unanimously adopted :

Resolved, That a copy of the Proceedings, as far as published, be presented to Dr. Henry A. Ford, of Liberia, Africa, in return for his recent valuable contributions to the Academy, from that country.

Dr. Elwyn offered the following, which was adopted :

Resolved, That a Committee be appointed to communicate with Commodore Perry, in relation to making collections of objects of Natural History in India, by the U. S. Expedition which is to sail shortly for that station.

Committee—Mr. Cassin, Dr. Ruschenberger and Dr. Elwyn.

ELECTION.

Amory Edwards, Esq., of New York, and Charles H. Budd, M. D., of Pemberton, N. J., were elected *Members*, and Henry A. Ford, M. D., of Liberia, Western Africa, was elected a *Correspondent* of the Academy.

April 6th.

Vice-President BRIDGES in the Chair.

Letters were read

From the Royal Academy of Sciences at Vienna, dated October 26, and December 12, 1851, transmitting the "Denkschriften, Mathematische-Naturwissen. Classe," vol. 3, part 1, and "Sitzungsbericht, Mathemat. Naturwissen. Classe," vol. 6 and vol. 7, parts 1 and 2.

From Dr. F. H. Troschel, dated Bonn, Jan. 16, 1852, acknowledging receipt of Proceedings of the Academy, vol. 5, Nos. 3, 4, 6, 7 and 8, and requesting other numbers deficient in his series; also transmitting "Archiv für Naturgeschichte," No. 6, 1849, Nos. 2, 3, 4 and 5, 1850, and Nos. 1, 2, 3, 1851.

From the Royal Academy of Sciences of Naples, dated Jan. 24, 1852, acknowledging the receipt of late Nos. of the Proceedings.

A paper was presented by Col. George A. McCall, intended for publication in the Proceedings, describing a new species of *Carpodacus*. Referred to Mr. Cassin, Dr. Woodhouse and Dr. LeConte.

Dr. Woodhouse read a paper, intended for publication in the Proceedings, entitled, "Description of new species of Birds of the genera *Vireo*, *Vieill.* and *Zonotrichia*, *Swain.*," collected by the author in Texas, while attached to the late U. S. Expedition under Captain L. Sitgreaves, for exploring the Zuni and Colorado Rivers of the West. Referred to Col. McCall, Mr. Cassin and Dr. Wilson.

Dr. LeConte offered the following additional remarks on some fossil *Pachyderms*, from Illinois, referred to on page 3 of the present volume :

Having recently had an opportunity of inspecting an entire skull in the possession of Dr. Leidy, closely allied to, if not identical with the cranium described by me as *Hyops*, and afterwards as *Dicotyles depressifrons*, I have the satisfaction of being able to arrange this confusing mixture of bones in a natural manner. I have seen distinctly that the parts described as belonging to the upper jaw of *Platygonus compressus*, in reality belong to *Hyops*, but that the singularly dilated lower jaw associated with them, is part of another animal for which the name *Platygonus* must be retained. The large inferior canine referred to *Dicotyles depressifrons* is perhaps the canine of the genus with dilated jaw; at any rate, it cannot belong to *Hyops*, and until the canine of *Platygonus* is found in situ, it would be more natural to consider it as not indicating a third animal, of which no other trace remains.

The inferior molars and canine from another locality, on which the genus *Protochærus* was founded, also belong to *Hyops*. In palliation of this blunder, I may say, that the cranium and superior canines and molars of *Hyops* were associated with no lower teeth except those in the fragment of dilated jaw, which